



[3410-11-P]

DEPARTMENT OF AGRICULTURE

Forest Service

Sand Lick Fork Watershed Restoration Project; Daniel Boone National Forest, KY

AGENCY: Forest Service, USDA.

ACTION: Notice of intent to prepare an environmental impact statement.

SUMMARY: The Sand Lick Fork Watershed Restoration Project involves activities to improve water quality and reduce soil loss by plugging abandoned oil wells, removing abandoned flow lines, restoration of stream channels and associated floodplains, and managing/maintaining the many open roads in the Sand Lick Fork area. The project is located on National Forest System Lands in Powell County, Kentucky bounded on the east by Natural Bridge State Resort Park. Includes lands in Sand Lick Fork, Barker Branch, Pot Hollow, and Sand Cave Branch. Project Activities include: Plugging of up to 165 abandoned oil wells, removal of approximately 50 miles of abandoned flow lines used to service the oil wells, restoration of 2.5 miles of stream channel and associated floodplain, decommissioning of 1.1 mile of NFSR 212, conversion of 0.6 miles of Powell County Road 212 to Forest Service maintenance, conversion of 3.1 miles of system roads open to highway legal vehicles to administrative use only (includes sections of NFSRs 212, 212A, 2045, 2120 and the section of county road to be transferred to Forest Service maintenance), conversion of 0.9 miles of system road from administrative use only to closed (includes NFSR 2120B and 2120C), and

obliteration of up to 22 miles of unauthorized roads when no longer needed for well-plugging or other proposed activities.

DATES: Comments concerning the scope of the analysis must be received by [insert date 30 days from date of publication in the Federal Register]. The draft environmental impact statement is expected December 2012 and the final environmental impact statement is expected February 2013.

ADDRESSES: Send written comments to USDA--Forest Service, 2375 KY 801 South, Morehead, KY 40351. Comments may also be sent via e-mail to comments-southern-danielboone-cumberland@fs.fed.us, or via facsimile to (606) 784-6435.

FOR FURTHER INFORMATION CONTACT: Tom Biebighauser at 606-784-6428 extension 102 or via e-mail at tombiebighauser@fs.fed.us.

Individuals who use telecommunication devices for the deaf (TDD ) may call the Federal Information Relay Service (FIRS) at 1-800-877-8339 between 8 a.m. and 8 p.m., Eastern Time, Monday through Friday.

#### SUPPLEMENTARY INFORMATION:

##### Purpose and Need for Action

Well Plugging: The primary purpose of the well plugging activity is to

reduce or eliminate current and future groundwater contamination with oil and brine leaching from the well casings or the rock strata containing oil deposits. Open wells can contaminate groundwater with chlorides and affect drinking water. It is important to plug the wells since the iron well casings rust over time, allowing oil and brine to contaminate clean groundwater. The polluted groundwater can eventually appear in streams, rivers, and drinking wells far from the area, and can potentially affect humans, fish and wildlife, and Federally Endangered Species. The open wells will not heal themselves over time. The longer they are allowed to stay open, the greater the pollution they will cause. Homes are located less than one mile downstream from the oil wells, and the water these residents are using may be affected by these open oil wells. Goal 3 of the 2004 Forest Plan provides, in part, to manage and/or restore watersheds to ensure water quality supports designated beneficial uses. Residential and community drinking water is one such use for this area. Objective 3.0.0 of the Forest Plan concentrates restoration efforts in watersheds with impairments, such as the TMDL limit for chlorides in Sand Lick Fork. Additionally, for riparian areas the Forest Plan seeks to maintain and restore the water quality (biological and chemical) necessary to support riparian ecosystems (1.E-Goal 3). The Commonwealth of Kentucky provides clear direction to plug oil wells that are no longer being used: "Unless written permission shall be obtained from the department, no operator or owner shall permit any well drilled for oil, gas, salt water disposal or any other purpose in connection with the production of oil and gas, to remain unplugged after such well is no longer used for the purpose for which it was drilled or converted. However, nothing herein shall prevent the department, upon application and for good cause shown, from issuing a temporary permit, for a period not exceeding two (2) years, to an operator to leave a well unplugged, and nothing herein shall alter the provisions of KRS 353.170 relative to utilizing a well for the purpose of introducing air, gas, water or other liquid pressure into or upon the

producing strata for the purpose of recovering oil and gas. The permission for temporary abandonment may be renewed at the end of the two (2) year period by reapplication. All wells on which a temporary abandonment permit has been issued shall be cased and capped in such a manner so as to protect all potential oil and/or gas zones and fresh water."

Flowline and other infrastructure removal: The primary purpose of the pipe removal activity is to reduce or eliminate current and future surface water contamination caused by oil and brine leaching from the flow-lines. The polluted water can eventually appear in streams, rivers, and drinking wells far from the area. The flow-lines will not heal themselves over time. The longer they are allowed to stay open, the greater the pollution they will cause. Goal 3 of the 2004 Forest Plan provides, in part, to manage and/or restore watersheds to ensure water quality supports designated beneficial uses. Objective 3.0.0 of the Forest Plan concentrates restoration efforts in watersheds with impairments, such as the TMDL limit for chlorides in Sand Lick Fork. Additionally, for riparian areas the Forest Plan seeks to maintain and restore the water quality (biological and chemical) necessary to support riparian ecosystems (1.E-Goal 3).

Stream Restoration: Sand Lick Fork and its tributaries were historically impacted by activities that involved channeling and straightening prior to acquisition by the Forest Service. In addition, portions of Sand Lick Fork are currently used by motor vehicles for travel. Stream bank erosion is evident along the altered streams, and the bottom of these streams is dominated by bedrock or sediment, which provides poor habitat for fish and the aquatic organisms they depend on for food. Goal 3.1 of the Forest Plan provides for the management of in-stream flows and water levels to protect stream processes and aquatic communities. The proposed restoration would move the area towards this goal. Additionally the Forest Plan provides for the maintenance of the physical

integrity of aquatic ecosystems, including stream banks, substrate, coarse woody debris, riffles, and other habitat components in 1.E-Goal 4.

Management of system and unauthorized roads: Field examination of existing roads (system and unauthorized) reveals that the lack of maintenance is impacting other resources in the watershed (Figure 18). The absence of grading, brushing, access control, and ditch cleaning, combined with uncontrolled use of the roads, has created areas of exposed soil and rutting, resulting in sedimentation of the streams and wetlands on NFS land. Additionally, the use of streams by motorized vehicles has impacted habitat and water quality in the streams. The Forest Plan provides direction related to the transportation system on the DBNF. Objective 12.0.A provides for the closure or obliteration of National Forest System roads and trails that do not meet their current management objectives. The Forest Service has completed a Travel Analysis for the watershed containing the Sand Lick Fork area, which identified the roads and trails that do not meet these objectives. Goal 12.1 in the Forest Plan provides for the minimization of sediment from roads or trails that reach streams. The objectives within this goal identify six specific ways to address sediment from roads. One is to reduce the number of road/stream crossings and the actual amount of road within 100 feet of streams. The decommissioning of portions of NFSR 212 responds to this goal. Erosion from roads may also be controlled by closing the roads.

#### Proposed Action

Plugging of up to 165 abandoned oil wells: Plugging oil wells would involve cleaning the well of debris, using a pump truck to remove oil and brine, and then filling portions of the well with concrete. Priority would be given to

wells that are most likely to have either a groundwater and/or a surface water connection. State approved well plugging techniques would be used and may be similar to the method described below. The DBNF would work closely with the Kentucky Division of Oil and Gas to implement the plugging of the oil wells. An inspector from the Kentucky Division of Oil and Gas would normally be onsite during the plugging operation.

None of the wells in the project area would be used as a domestic water source. Each well would need to be accessed by large trucks to accomplish the well plugging operation.

Because it would be necessary to drive both National Forest System and abandoned roads with large trucks to plug the wells, these roads would need to be improved (clearing and grading with heavy equipment such as a dozer), drained, and hardened with gravel. Small diameter trees and shrubs growing on the roads would be removed. These improved roads would not be maintained for public motor vehicle use after the wells are plugged.

The use of the abandoned roads to access the wells would be temporary, and these roads would be closed following use. Road closure can include the removal of culverts, installation of berms, re-contouring, loosening of compacted soils, placement of woody debris from surrounding woodland, and planting with native trees, shrubs, grasses, and wildflowers. Where culverts are removed, large rocks or logs would be buried in the ground to provide vertical grade control, preventing erosional head-cuts, or waterfalls from forming and advancing upstream.

Removal of approximately 50-miles of oil pipe and other oil-related

infrastructure: A large network of small diameter iron and plastic flow-lines were buried or laid on top of the ground to move oil from the wells to storage or processing facilities. Many of these flow-lines are exposed and are rusting. Because these flow-lines can contain oil, they have the potential to negatively affect water, soil, and fish and wildlife. The flow-lines that have the highest potential to affect the surface water would be drained and the oil and brine would be transported to an approved disposal facility. Flow-lines, residual oil, and brine would be removed and disposed of in an environmentally sound and state-approved manner. Priority would be given to flow-lines that are closest to streams and those that are showing the greatest level of deterioration. The flow-lines and storage tanks, along with their contents, would be disposed of according to existing laws and regulations

Restoration of approximately 2.5 miles of creek and floodplain: Restoration of sections of Sand Lick Fork and its tributaries would involve the use of heavy equipment, such as excavators and dozers, to relocate and reshape the floodplain and stream channel to a more natural condition. Native wildflowers, trees, and shrubs would be planted by hand. Erosion from head-cuts advancing up tributaries would be stopped. Where roads cross streams, the crossings would be designed to accommodate the passage of aquatic organisms.

An electric transmission line managed by East Kentucky Power Cooperative, Inc. follows Sand Lick Fork where the stream restoration is proposed. Trees would not be planted in the sections of right-of-way for the transmission line that overlap the floodplain for Sand Lick Fork to reduce the potential for outages. The utility company would continue to maintain the right-of-way and structures needed for the electric transmission line, as outlined in their special use authorization issued by the Forest Service for such activities.

A mixture of different types of wetlands would be established by using heavy equipment, such as an excavator. This mixture would provide for a variety of hydrologic conditions, which would increase the types of habitat for plants and animals.

Management of National Forest System roads and unauthorized roads: Proposed activities include decommissioning of 1.1 mile of NFSR 212, conversion of 0.6 miles of Powell County Road 212 to Forest Service maintenance, conversion of 3.1 miles of system roads open to highway legal vehicles to administrative use only (includes sections of NFSRs 212, 212A, 2045, 2120 and the section of county road to be transferred to Forest Service maintenance), conversion of 0.9 miles of system road from administrative use only to closed (includes NFSR 2120B and 2120C). Some of these system roads are severely eroded and in poor condition from intense use. The proposed status changes would occur following the completion of other restoration activities that are part of this proposed project.

For those roads where the proposed status is 'Administrative Use,' the change would be accomplished by the installation of gates that would close the system road to public use. System roads to be managed for administrative use would be subject to periodic grading, addition of gravel, ditching, culvert cleaning, and replacement. For the system roads where the proposed status is 'Closed', the change would be accomplished by the installation of earthen berms and other barriers, such as guard rails. Erosion occurring on these roads would be controlled by installing culverts, dips, and spreading of gravel.

For system roads where the proposed status is 'Decommissioned', the change would be accomplished during stream and wetland restoration activities. Decommissioning may include culvert removal, addition of buried vertical grade

control to stop head-cutting, loosening compacted soil, contouring, adding dips and large woody debris, restoring small wetlands, restoring ephemeral and intermittent stream sections affected by the road, and planting native trees, shrubs, grasses, and wildflowers. Heavy equipment, such as dozers and excavators, would be used to complete this work.

The unauthorized roads would be closed to public vehicle use during the implementation of this project with physical barriers such as gates, rocks, and berms, and by law enforcement action. These roads are temporarily needed for plugging oil wells, and they would be improved with grading and the addition of gravel prior to work commencing.

Unauthorized roads would be obliterated following the accomplishment of the other actions in this proposal. Obliteration may include culvert removal, addition of buried vertical grade control to stop head-cutting, loosening compacted soil, contouring, adding dips and large woody debris, restoring small wetlands, restoring ephemeral and intermittent stream sections affected by the road, and planting native trees, shrubs, grasses, and wildflowers. Heavy equipment, such as dozers and excavators, would be used to complete this work. Rock, soil, and trees from onsite and off-site may be used for these purposes.

Responsible Official

James D. Manner, Cumberland District Ranger

Nature of Decision To Be Made

The Responsible Official will be deciding to implement or not implement the

proposed action or some modification of it that best meets the purpose and need for the project.

#### Permits or Licenses Required

To implement the project the Forest Service will have to acquire a Section 401 Permit and a Floodplain Permit from the Kentucky Division of Water. Floodplain permit.

#### Scoping Process

This notice of intent initiates the scoping process, which guides the development of the environmental impact statement. In addition, members of the public who have in the past requested to be notified of projects of this type or who participated in the Natural Bridge Integrated Resource Management Strategy (IRMS) will be mailed (hardcopy or electronic depending upon their expressed preference) a project description of this proposed action. Also, documents related to this proposed action, including this NOT, will be published on the Forest webpage.

It is important that reviewers provide their comments at such times and in such manner that they are useful to the agency's preparation of the environmental impact statement. Therefore, comments should be provided prior to the close of the comment period and should clearly articulate the reviewer's concerns and contentions.

Comments received in response to this solicitation, including names and

addresses of those who comment, will be part of the public record for this proposed action. Comments submitted anonymously will be accepted and considered, however.

August 29, 2012

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James D. Manner,  
District Ranger

[FR Doc. 2012-22234 Filed 09/10/2012 at 8:45 am; Publication Date: 09/11/2012]